

isc Silicon NPN Power Transistor

BU508A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEX} = 1500V(\text{Min})$
- High Power Dissipation-
: $P_D = 125W@T_C = 25^\circ\text{C}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

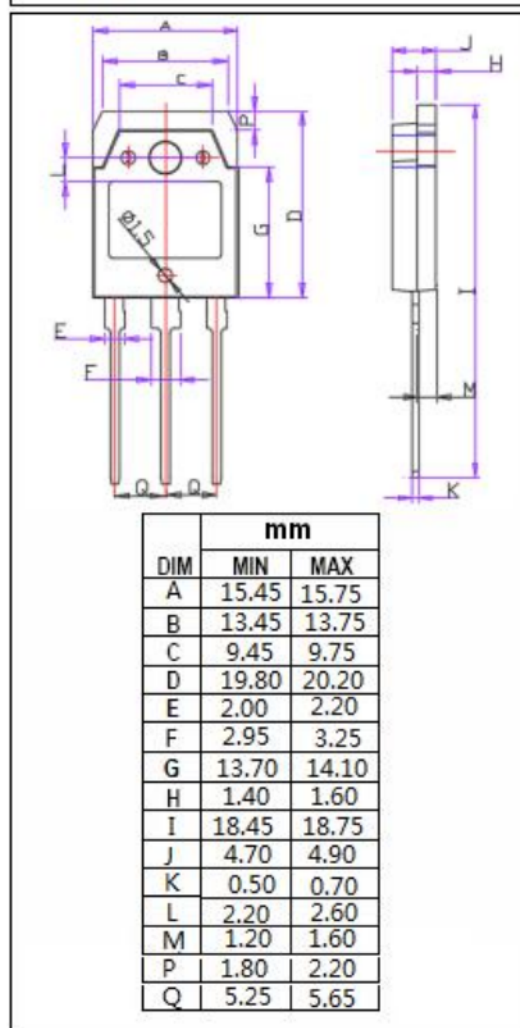
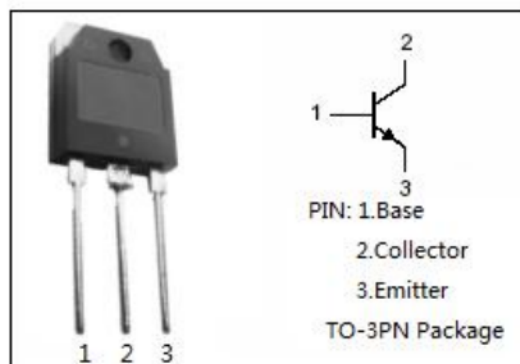
- Designed for use in large screen color deflection circuits.

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector- Emitter Voltage($V_{BE} = 0$)	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current- Continuous	4	A
I_{BM}	Base Current-Peak	6	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	125	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 30\text{mA}$; $I_B = 0$	700			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 4.5\text{A}$; $I_B = 2.0\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 4.5\text{A}$; $I_B = 2.0\text{A}$			1.3	V
I_{CES}	Collector Cutoff Current	$V_{CE} = 1500\text{V}$; $V_{BE} = 0$ $V_{CE} = 1500\text{V}$; $V_{BE} = 0$; $T_C = 125^{\circ}\text{C}$			1.0 2.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5.0\text{V}$; $I_C = 0$			0.1	mA
h_{FE}	DC Current Gain	$I_C = 0.1\text{A}$; $V_{CE} = 5\text{V}$	6		30	
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = 10\text{V}$; $f_{test} = 0.1\text{MHz}$	125			pF
f_T	Current-Gain—Bandwidth Product	$I_C = 0.1\text{A}$; $V_{CE} = 5\text{V}$; $f_{test} = 1.0\text{MHz}$		7		MHz

Pulsed: Pulse duration $\leq 300\text{ us}$, duty cycle $\leq 1.5\%$